



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
REGION II

290 BROADWAY  
NEW YORK, NEW YORK 10007 -1866

C MAIL

Paul S. Brzozowski  
Project Coordinator  
Tierra Solutions, Inc.  
2 Two Center Boulevard  
East Brunswick, NJ 08816

Re: Diamond Alkali, Lower Passaic River Study Area – River Mile (RM) 10.9  
Unilateral Administrative Order for Removal Response Activities (UAO)  
USEPA Region 2 CERCLA Docket No. 02-2012-2020

Dear Mr. Brzozowski :

This letter responds to the submittal by Tierra Solutions, Inc. (Tierra) on behalf of Occidental Chemical Corporation (Occidental) of the RM 10.9 Survey Quality Assurance Project Plan (QAPP) Revision 1 submitted on May 9, 2014 and the Health and Safety Assurance Plan (HSP) submitted on April 30, 2014. The U.S. Environmental Protection Agency (EPA) has reviewed the aforementioned documents as well as Tierra's response to EPA comments and revised Pipeline Survey Statement of Work (SOW) submitted on April 16, 2014.

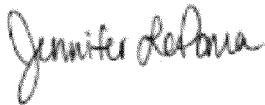
As discussed further in the enclosure, EPA does not agree with the statement made in QAPP Worksheet #8, which relays that due to the non-invasive nature of the work, training in accordance with Occupational Safety and Health Administration (OSHA) 29 Code of Federal Regulations (CFR) 1910.120 (e) (3) and (8), will not be required of all project team members. Based on our review, these workers must comply, at minimum, with 29 CFR 1910.120 (e) (3) (ii) and (iii) *Hazardous Waste Operations and Emergency Response* (HAZWOPER).

Per Paragraph 17 of the UAO, a Quality Management Plan (QMP) is to be submitted to EPA, which demonstrates a quality system that complies with the referenced specifications. If Occidental, through Tierra, will be using University of Illinois (UOI) as its contractor for this work, a QMP should be submitted on behalf of UOI, which will be reviewed by EPA to evaluate UOI's technical qualifications. It is EPA's understanding that UOI does not have a QMP. UOI should promptly prepare and submit a QMP, allowing EPA time to determine if UOI's qualifications are sufficient such that work will be able to proceed in mid-August as anticipated. Please let EPA know the anticipated submission date of UOI's QMP.

Tierra's April 16, 2014 response to EPA's comments and submission of a revised SOW informed us that UOI has not used the Parametric Echosounder (PES) or Ground Penetrating Radar (GPR) techniques for subsurface pipeline detection. This, in addition to the lack of a QMP, raises questions about whether UOI has the experience and expertise necessary to be the sole contractor for this work. Furthermore, EPA strongly recommends that Tierra consider additional physical measures to validate the results of the GPR and PES surveys.

Pursuant to Paragraph 36(b) of the UAO, please resubmit the QAPP by June 13, 2014, addressing the comments in this letter and the enclosed document, and including the QMP for UOI for our review. If UOI is unable to provide a QMP, steps should immediately be taken to identify a contractor that can meet EPA's requirements. Additionally, please document any additional survey validation techniques in a revision to the SOW. If you would like to further discuss these matters please schedule a time to speak with me at your earliest convenience.

Sincerely,



Remedial Project Manager  
U.S. EPA – Region 2  
(212) 637-4328

Enclosure

cc: R. Basso, ERRD  
S. Flanagan, ORC  
P. Hick, ORC  
C. Dinkins, Vinson & Elkins

## Enclosure I

### EPA Comments (May 29, 2014) on Quality Assurance Project Plan (QAPP) for River Mile 10.9 Pipeline Surveys: Geophysical Surveys: Parametric Echosounder and Ground Penetrating Radar Revision 1, Dated May 2014

#### General Comments:

1. Please specify how field crews plan to maneuver the GPR near trees along the shoreline.
2. Please verify if any attempts will be made to take the GPR on the mudflat during low tide to try and overlap with, or measure in proximity to, the PES data.
3. Specify how field crews will be able to receive GPS signals under the tree canopy along the shoreline, or will these areas just be omitted from the survey?
4. Please confirm if any comparison of the survey data results to any existing data (e.g., OSI's magnetometer data which had a few "hits" near the pipeline locations) will be conducted?

#### Specific Comments:

5. **Section 1, Intro, not numbered:** In the first paragraph, please remove the words "on Consent" from the reference to the UAO, i.e., "the Unilateral Administrative Order ~~on~~ ~~Consent~~." The same error appears on Worksheet #2, page 1
6. **Section 1.1, Background Information, not numbered:** In several locations, including in the two paragraphs on page 6, the document refers to the CPG removal at 10.9 as a "remediation". This term should not be used, as this is a removal action, not a remedial action. Please check text for all occurrences and revise text accordingly.
7. **Worksheet 1, Page 1 of 1:** The Investigative Organization Project Manager and Project QA Manager may need to be revised pending EPA's receipt, review, and response to UOI's QMP.
8. **Worksheet 2, page 1 of 2:** Please revise Item 7 herein as per comment 5 above.
9. **Worksheet 2, page 2 of 2:** At the top of the page, Tierra is identified as Project Coordinator. The Project Coordinator is a person, i.e., Paul Brzozowski. Please revise accordingly.
10. **Worksheet 3:** It is unclear why someone from the University of Birmingham, in the UK, Greg Smith is the GPR task lead. Please clarify this, what his relationship is to UOI, and what his qualifications are, in a response back to EPA.
11. **Worksheet 5:** The land surveyor needs to be identified. Please provide this information in the revised QAPP.
12. **Worksheet 7:** Greg Smith's responsibilities are listed as "perform GPR task." Please refer to comment 9, above.
13. **Worksheet 8, Page 1:** The text states HAZWOPER 40-hr training is not required for all workers "due to the non-invasive nature of the work." EPA does not agree with this statement as it is possible that workers surveying on mudflats/side -slopes/shorelines may come in direct contact when completing the GPR survey. Additional exposure from contact with bottom sediments while completing the bar check or sound velocity cast with the PES survey may also occur. Based on a review of the requirements, these

workers will be on site for a specific, limited task and as such would need to comply, at minimum, with 29 CFR 1910.120 (e) (3) (ii) and (iii) HAZWHOPER. Please provide a response to EPA regarding this matter and revise the QAPP and task list in HSP accordingly.

14. **Worksheet 8: it is unclear if there are** special training requirements for the personnel in order to operate the GPR, GPS, and PES that will be used. Please provide EPA with a response and clarify in the revised version of the QAPP.
15. **Worksheet 10, Page 1 of 2:** In the cover letter to this enclosure, EPA strongly recommends that Tierra consider additional physical measures to validate the results of the GPR and PES surveys. Any revision to the SOW, including additional physical measures, should be reflected in this worksheet.
16. **Worksheet 11, Page 1 of 4:** Under “who will use the data?” the QAPP refers to USEPA and Partner Agencies, Tierra and the CPG. Please include Occidental in this list before Tierra.  
Under “what will the data be used for” instead of referring to “USEPA and the CPG,” please refer to “USEPA, Occidental, and the CPG.”
17. **Worksheet 11, Page 2 of 4:** In the fifth paragraph under “How much data are needed?” reference is made to the “Field Team Leader.” As this is the first time this title has been used in the document, please clarify who that is or revise the text. This same title also appears in Worksheet 14, on page 2 of 3.
18. **Worksheet 11, Page 4 of 4:** Under “When will the data be collected?” please update to Summer 2014.
19. **Worksheet 16, Page 1 of 1:** Please update all these dates.
20. **Worksheet 29, Page 2 of 2:** Data storage or retrieval says that data and records will be made available to USEPA in accordance with the AOC (USEPA 2004). The reference should be to the UAO (USEPA 2012).
21. **Worksheet 35, Page 1 of 1:** UOI Survey manager “or designee” is responsible for validating equipment, field records and database output. Please clarify and revise to reflect who the designee is/will be.
22. **Standard Operating Procedure No. 3, Parametric Echosounder Surveying:** The SOP is lacking a detailed discussion regarding data timing and synchronization. Please see comments directly below and clarify to EPA and revise accordingly in the QAPP:

**19a.** Please clarify how fast the vessel be making transits. This is important if data is only being recorded once per second, as was described in the main body of the QAPP.

**19b.** Is there any system latency for which Tierra needs to account (i.e., offset between measurement time and the time that is actually stamped with that measurement)? Please confirm if Tierra will be testing for latency?